April 28, 1989

TO: File

FROM: Holland Shepherd, Reclamation Soils Specialist HS

RE: Site Visit Moab Salt, M/019/005, Grand County, Utah

Scott Johnson and I met today with two representatives from Moab Salt, Mr. Rick York and Mr. Allen Tapp. The meeting was held to discuss more permitting questions concerning the upcoming tentative approval for the Moab Salt operation and to field evaluate the site.

The first portion of the site that we visited was the plant/processing area and road salt storage area. This area contained several loose piles of salt. These areas were not lined and were not protected by berms. The operator indicated to me that the salt is not picked up by surface drainage and moved off towards the Colorado because of the relatively flat surface area associated with the plant site. An inspection of the perimeter of this area turned up no evidence of salt contamination escaping towards the river. The operator does, periodically, scoop up piles of loose salt and removes these piles to a controlled location.

I spoke to Mr. Allen Tapp about final reclamation plans for this area; he indicated to me that the soils in the area were high in salt contamination. At final reclamation a large portion of the site, salt and soil will be scooped up and removed to disposal areas away from the plant site. The area will then be tested for soil-salt content; if that content is too high, the area will then be either leached or more contaminated soil will be removed off site to the Brine Lake salt storage area.

Another portion of the inspection was performed to look at an area that may be used for soils and plant test plots in the near future. We looked at an area in between 3 Canyon and 4 Canyon where the operator has deposited quite a bit of contaminated silt from the bottom of 3 Canyon. This brine contaminated silt would be an excellent material to use for the evaluation of the test plots. The material is highly brine saturated and will mimic the material underneath the evaporation ponds. Mr. Tapp indicated that the design of the test plots would consist of liners on top of which 8 to 10 feet of the brine saturated material would be placed; various amendments would then be applied to the material to determine it's growth medium potential. No other sites were located during this inspection for test plot establishment.

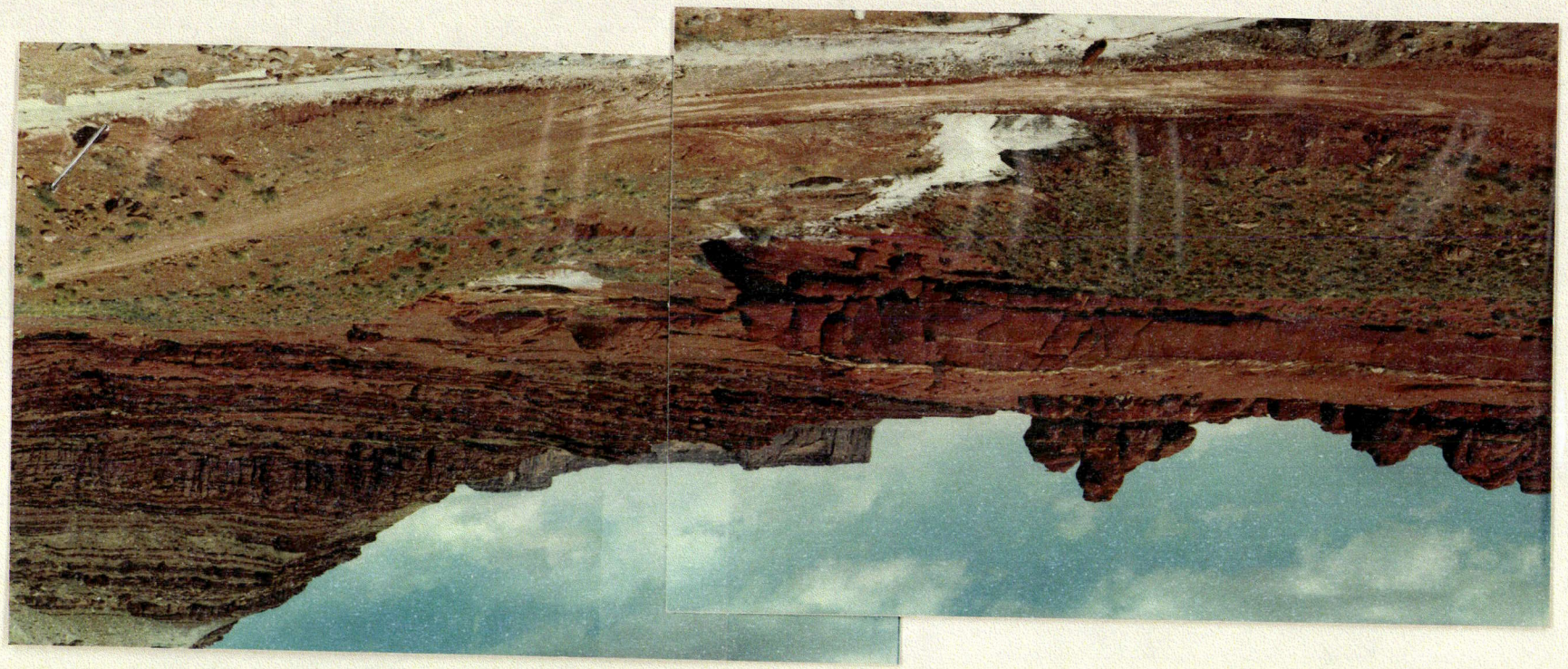
After the site inspection, we went back to the operators office to discuss permit scheduling. The operator indicated to us that their response to our latest review would be back to the Division by the middle of May. We told them we would like to get a tentative approval to them by the end of May and that the public notification period would then start the first part of June. The public notification period would run throughout the month of June. We told the operator that we would like to bring them in before the Board for final approval and surety approval by the end of July this year.

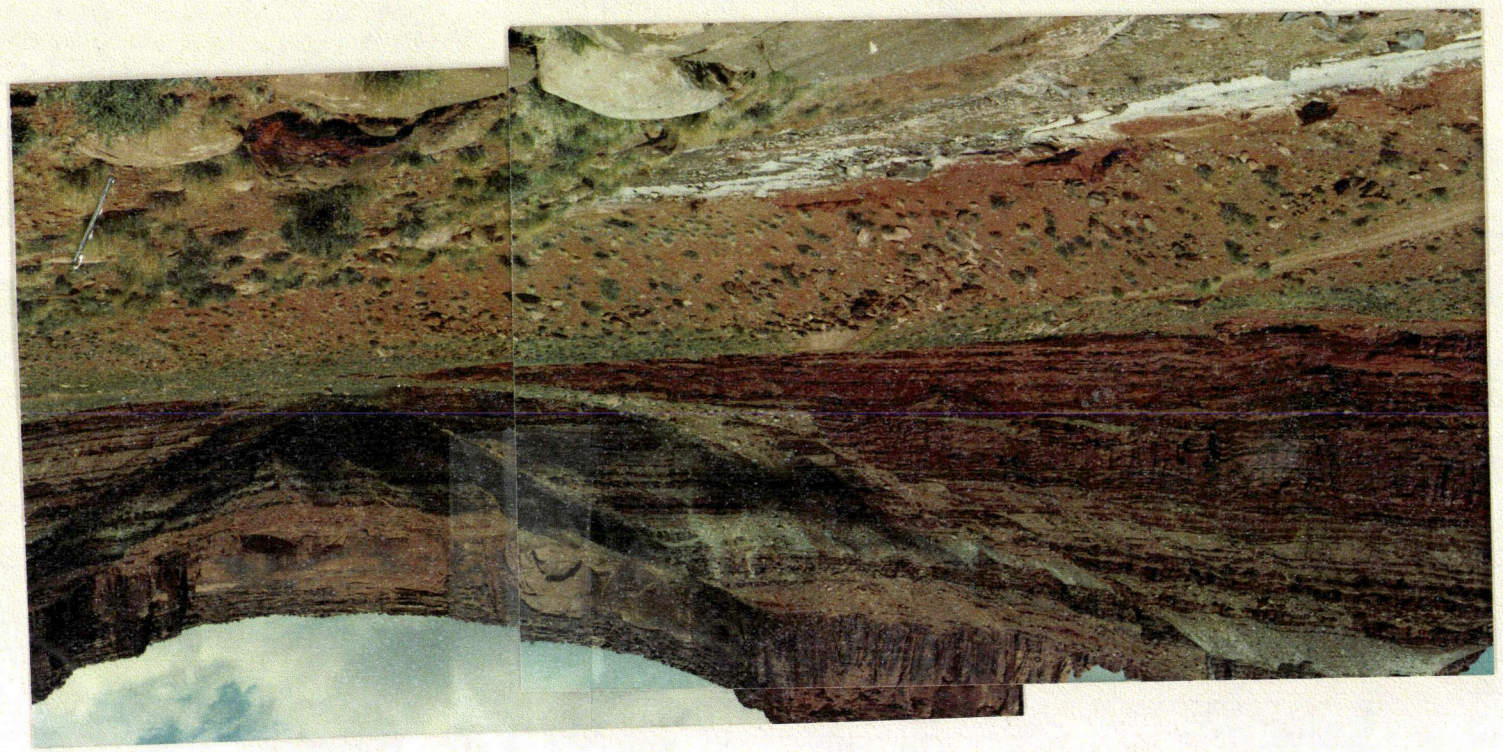
We discussed surety with the operator. The operator indicated that he was still interested in posting a self bond with the Division. We explained to the operator that the Division would probably not look favorably on a self bond and that he should consider another form of surety such as an insurance bond or some form of collateral. At that point, the operator indicated that they would re-evaluate the bond amount, which they had earlier established and submit a new estimate to us with their response package that will be coming up in the middle of May. The operator feels that they have over estimated the earlier bond amount by a substantial amount, as do we, and if they don't file a self bond it will be necessary to get that amount down as much as possible. An estimate of the Brine Lake reclamation had not been included in the earlier bond estimate. This, the operator indicated, would be evaluated in their next bond evaluation.

We discussed upgrading the canyon water collection system with the operator next. The operator indicated that instead of building a couple large dams in 3 and 4 Canyon that a series of collection dams (small dams) would be built instead above the canyon. The existing Molby Dam and Kelly Dam in 3 and 4 Canyons will be left in place and reconstructed, but they will not be increased substantially in size. The operator needs to finish cleaning out silt from behind these two dams and improving the well pumping system connected with these dams. The operator hopes to contain most of the drainage coming off the evaporation ponds before it actually gets to the canyons. The Molby and Kelly Dams would then be used as a backup for any drainage that the containment ponds above the canyons were not able to catch.

After our visit with the operator, we decided to take a tour around the facility using the county road that goes across private land and BLM land and into the national park. See, we wanted to evaluate any sign of leakage coming from the facility away from the facility area. The only obvious sign of brine escaping to the Colorado River was a well site just south of the evaporation ponds and the railroad tracks. The area had been cleared of tamarisk, recently dozed. There was a small retention pond and a large wellhead containing a 6 or 8" pipe. It appeared that a substantial amount of water had escaped from this well and had gone down toward the Colorado River. We saw no other signs of major leakage as we followed the county road around and through the mine site. We followed the county road until it turned into the Schaffer Trail, which we took to the top of the plateau overlooking the mine site, where we were able to take some good panoramic pictures of the entire site. These pictures should be available in the mine file.

jb
cc: Lowell Braxton
Minerals Team
MN4/108-110





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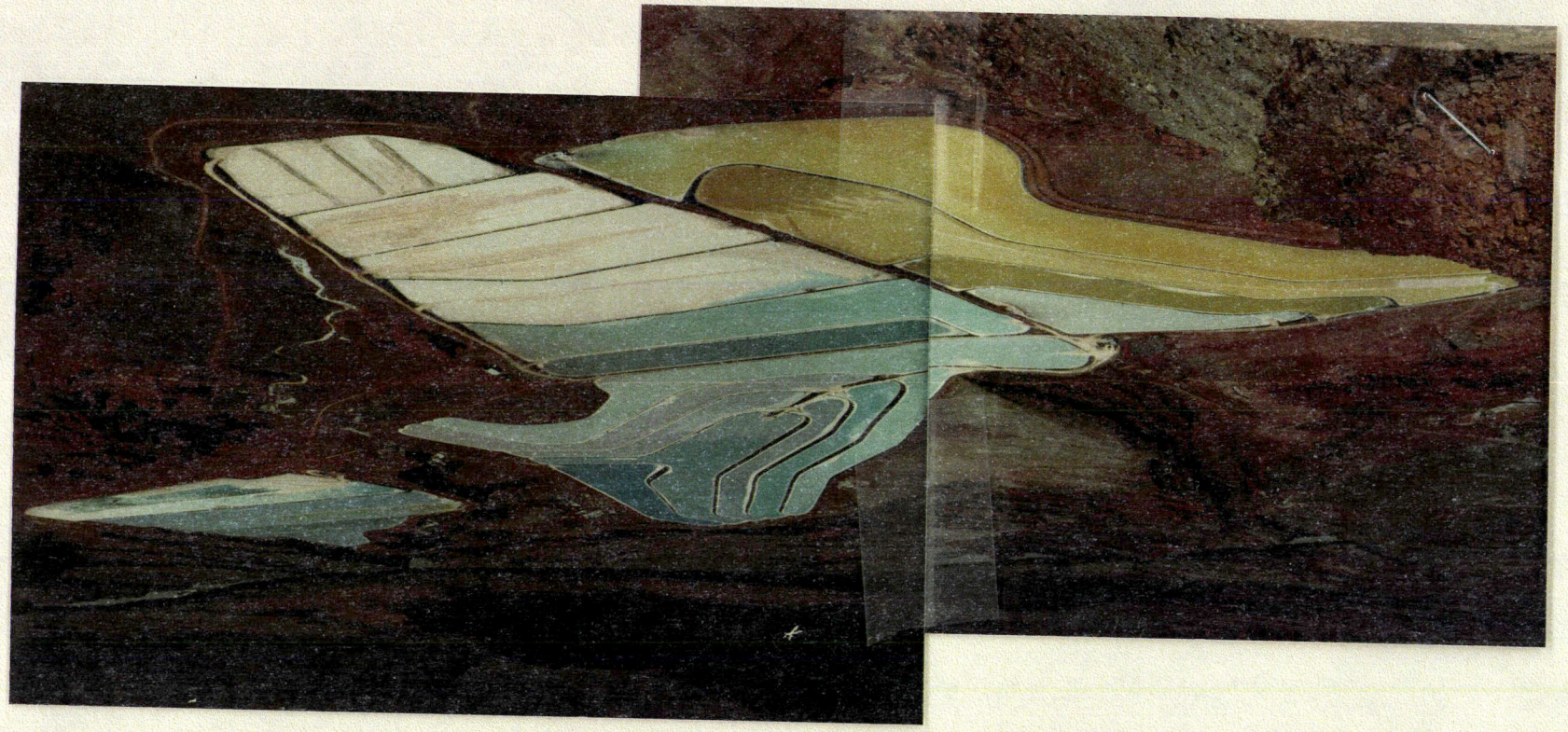
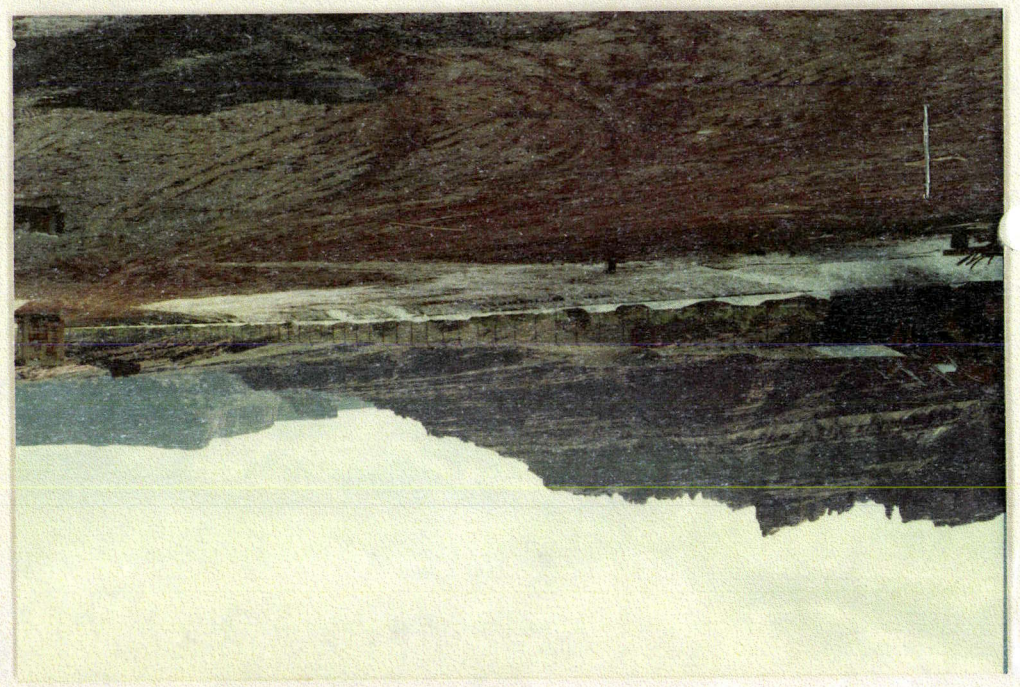
Northwest drainage of canyon above evap. ponds. Salt in drainage. Rugged terrain prevents installation of diversion ditch.





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Salt Storage area bird's eye view.

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Salt dumps along railroad tracks. Could pose problem if drainage picks up & removes off site.

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Panoramic view of Evap ponds. Salt deposits can be seen along drainages to Colorado River.